

**Notice of Allowability**

Application No.

10/535,757

Examiner

Courtney Thomas

Applicant(s)

HEUFT ET AL.

Art Unit

2882

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the preliminary amendment filed 05/20/05.
2. ☒ The allowed claim(s) is/are 1, 2 and 6-14.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☒ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☒ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☒ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),  
Paper No./Mail Date 05/20/05
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_.
7. ☐ Examiner's Amendment/Comment
8. ☐ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_.

## **DETAILED ACTION**

### ***Allowable Subject Matter***

1. Claims 1, 2 and 6-14 are allowed.
2. The following is an examiner's statement of reasons for allowance:
3. **As per claim 1**, the examiner found no reference in the prior art that disclosed or made obvious an X-ray unit comprising: a simmer power supply unit by which a low voltage is continuously applied to an anode wherein the low-voltage is at most sufficient for the generation of low-energy X-radiation and pre-heats the X-ray tube; wherein the simmer power supply unit is a voltage source of the Marx generator, as recited in independent claim 1.
4. **As per claim 2**, the examiner found no reference in the prior art that disclosed or made obvious an apparatus comprising: a simmer power supply unit by which a low voltage is continuously applied to an anode wherein the low-voltage is at most sufficient for the generation of low-energy X-radiation and pre-heats the X-ray tube, as recited in independent claim 2.
5. **As per claim 6 and dependent claims 7 and 8**, the examiner found no reference in the prior art that disclosed or made obvious a method of generating an X-ray pulse comprising the step of preheating an X-ray tube by continuously applying a low voltage to the X-ray tube wherein the low voltage preheats the X-ray tube and is at most sufficient for the generation of low-energy X-radiation, as recited in independent claim 6.
6. **As per claim 9 and dependent claims 10-14**, the examiner found no reference in the prior art that disclosed or made obvious a method of inspecting object comprising the step of: preheating an X-ray tube by continuously applying a low voltage to the X-ray tube wherein the

Art Unit: 2882

low voltage preheats the X-ray tube and is at most sufficient for the generation of low-energy X-radiation, as recited in independent claim 9.

7. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

9.

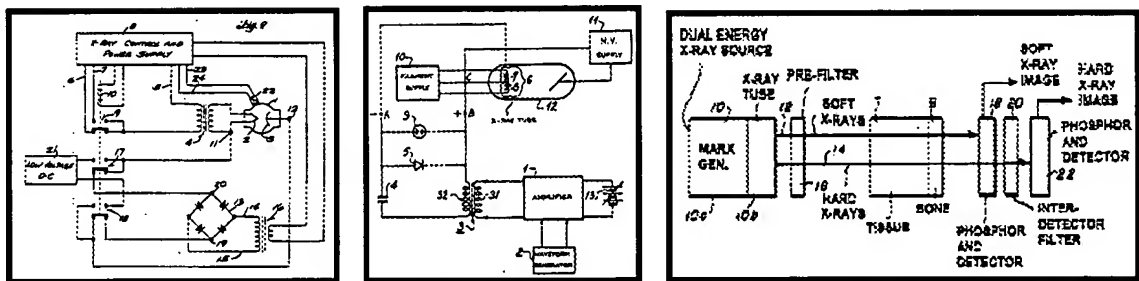


Fig. 2 – U.S. Patent 3,567,939 to Schadler (L)

Fig. 2 - U.S. Patent 4,213,048 to Quang et al. (C)

Fig. 1 - U.S. Patent 6,285,740 to Seely et al. (R)

10. The aforementioned references to Schadler and Quang et al. disclose X-ray imaging systems and methods comprising low voltage supplies that pre-heat an X-ray tube prior to exposure. The references fail to disclose systems and/or methods comprising the continuous application of low voltage to an X-ray tube wherein the low voltage preheats the X-ray tube and is at most sufficient for the generation of low-energy X-radiation as claimed. Cited reference to Seely et al. discloses a dual energy X-ray exposure apparatus and method comprising a Marx

Art Unit: 2882

generator. Seely et al. also fails to disclose the limitation of continuous application of a low voltage to an X-ray tube, as claimed above.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Courtney Thomas whose telephone number is (571) 272-2496. The examiner can normally be reached on M - F (9 am - 5 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ed Glick can be reached on (571) 272 2490. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink that reads "Courtney Thomas". The signature is written in a cursive style with a large, stylized "T" at the end.

Courtney Thomas  
Examiner  
Art Unit 2882